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***Student Notes***  
***Science on Saturday***  
***Lawrence Livermore National Laboratory***  
***March 17, 2007***

***Diet and Cancer: Are  
Cooked Meats Involved?***

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Goal

Students will learn about methods and limitations found in cancer research, and will explore how scientists at LLNL are investigating the relationship between diet and cancer.

**You will be able to answer the following at the end of this presentation:**

- I. What is a mutation?
- II. What do mutations have to do with cancer?
- III. What is the evidence that cooking produces mutagens?
- IV. How do bacteria tell us anything about cancer in animals or people?
- V. How do scientists decide when a chemical or radiation is a carcinogen?
- VI. How are chemicals from meat purified and measured?
- VII. How does cooking affect carcinogen formation?
- VIII. What are ways to reduce carcinogen formation?

**I. The tough job cells have—reproducing themselves.**

**II. DNA and mutations—the cells instructions.**

**III. Simplifying mixtures—Chromatography.**

**IV. How do bacteria tell us about cancer?**

Ames test, show petri dishes, results.